

CLAIMS

Please amend the previously presented claims as follows:

15. (Currently Amended) Process for estimating a propagation channel formed by successive symbols of a multi-carrier signal each comprising at least one reference pilot and a plurality of frequencies carrying data, the process comprising:

extracting the said at least one reference pilot(s) present in each of the said symbols;

obtaining a first estimate of the said propagation channel, by ~~analysis of time/frequency~~
interpolation on the said extracted reference pilot;

independently correcting the said reference pilot, in phase and amplitude, and as a function of the said first estimate, to output pilots with phase and amplitude correction, said correction step including a step to calculate an amplitude and phase error vector for each of the said reference pilots;

obtaining a second estimate of the said propagation channel, by analysis of the said corrected output pilot.

16. (Cancelled)

17. (Currently Amended) Process for estimating a propagation channel according to claim 46 15, wherein the said error vector calculation step includes averaging of a set of error vectors obtained on at least one symbol.

18. (Previously Presented) Process for estimating a propagation channel according to claim 17, wherein the said averaging is calculated on each symbol.

19. (Previously Presented) Process for estimating a propagation channel according to wherein the said set of error vectors only includes error vectors that satisfy at least one predetermined

quality criterion.

20. (Previously Presented) Process for estimating a propagation channel according wherein the said calculation step for an amplitude and phase error vector comprises a preliminary step in which the said pilots with an amplitude less than a first predetermined minimum average threshold and/or greater than a second predetermined maximum average threshold are rejected.

21. (Previously Presented) Process for estimating a propagation channel according to wherein the said second estimate includes an equalisation step that depends on the first estimate.

22. (Previously Presented) Process for estimating a propagation channel according to claim 21, wherein the said equalisation step is performed on all carrier frequencies of each of the said symbols.

23. (Previously Presented) Process for estimating a propagation channel according to wherein the process comprises a step after the said equalisation step to calculate a pulse response of the propagation channel as a function of the at least one reference pilot equalized by the equalization step, for refining synchronisation of receivers in time.

24. (Previously Presented) Process for estimating a propagation channel according to wherein the said the reference pilot correction step includes a division of these pilots by the first estimate.

25. (Previously Presented) Process for estimating a propagation channel according to wherein the said correction step of the at least one reference pilot also includes a final step to correct all equalised useful carriers taking account of an average value obtained as a result of the said averaging.

26. (Previously Presented) Process for estimating a propagation channel according to and

further comprising using the process for correction of at least one phase and/or amplitude error common to two cells in a same OFDM (Orthogonal Frequency Division Multiplex) type symbol.

27. (Currently Amended) A device for estimating a propagation channel formed of successive symbols of a multi-carrier signal each comprising at least one reference pilot, and a plurality of data carrier frequencies, the device comprising:

- means for extracting the said at least one reference pilot present in each of the said symbols;

- means for making a first estimate of the said propagation channel, by ~~analysis of~~ time/frequency interpolation on the said extracted at least one reference pilot;

- means of independently correcting the said at least one reference pilot, in phase and amplitude, as a function of the said first estimate, to output one or more pilots with phase and amplitude correction, said correction step including a step to calculate an amplitude and phase error vector for each of the said reference pilots;
and

- means of making a second estimate of the said propagation channel, by analysis of the said one or more pilots with phase and amplitude correction.

28. (Currently Amended) A device for estimating a propagation channel formed of successive symbols of a multi-carrier signal each comprising at least one reference pilot, and a plurality of data carrier frequencies, the device comprising:

- an extraction element, which extracts the at least one reference pilot present in each of the said symbols;

- a first estimation element, which makes a first estimate of the propagation channel, by ~~analysis of~~ time/frequency interpolation on the extracted at least one reference pilot;

- a correction element, which independently corrects the at least one reference pilot, in phase and amplitude, as a function of the first estimate, to output one or more

pilots with phase and amplitude correction, said correction step including a step to calculate an amplitude and phase error vector for each of the said reference pilots;
and

a second estimation element, which makes a second estimate of the said propagation channel, by analysis of the one or more pilots with phase and amplitude correction.